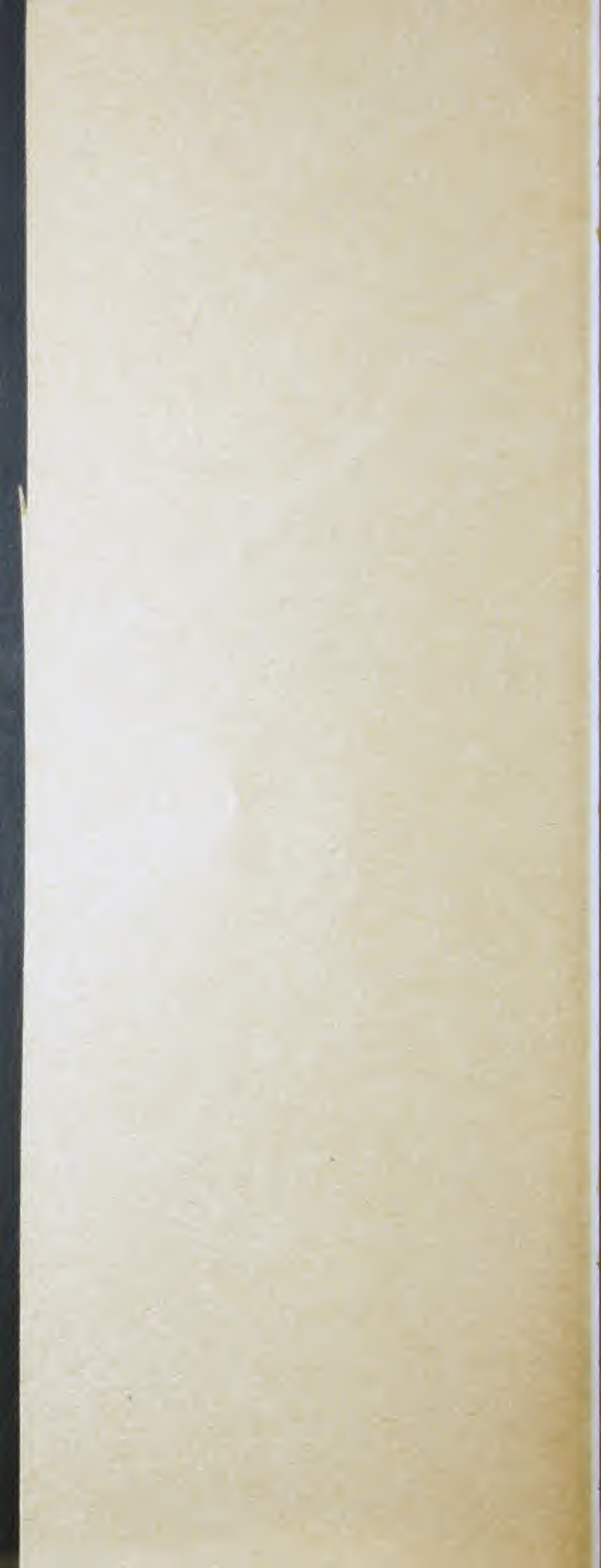


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How to finish California Redwood



How to Finish California Redwood



California Redwood
Association
Call Building
San Francisco

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Redwood is a Perfect Surface to Paint, Enamel or Stain

Nature made Redwood a perfect surface to stain, paint, or enamel.

It is free from pitch or resin, and there is no trouble with raised grain.

Redwood is porous and absorbs paint readily. Paint does not have to be forced into Redwood by use of excessive quantities of turpentine. Redwood has a cellular structure of large capacity which in thoroughly dry Redwood furnishes a penetration, giving paint or enamel a firm hold on the wood as well as taking a sufficient quantity to give a thorough covering and an even distribution.

Painting is a simple process. It consists of three agencies—

- (1) A vehicle to secure penetration (usually turpentine).
- (2) An oil to hold the color, and form a protective film on the surface.
- (3) The pigment or color itself.

Good paint will last until the oil film wears out and permits the finely ground particles of pigment to fall away as dust. The heavier the coat of oil and the deeper the penetration the better the job—Redwood's porosity or absorbing power is therefore a perfect surface to paint, enamel, or stain.

To insure best results Redwood should be thoroughly dry when painted, enameled, or stained. Unless absolutely necessary it should not be painted on a rainy day—the wood absorbs moisture from the air, which partially fills the pores that should be filled with paint.

If specific instructions given in this booklet for painting, enameling, or staining of Redwood are carefully followed, a novice can paint Redwood in a thoroughly satisfactory and serviceable manner.

How to Stain Redwood

Redwood possesses a beauty in grain and texture that makes it highly prized for interior trim. Redwood should not be covered with paint any more than mahogany or oak.

Redwood has a rich, warm, soft, reddish-brown color, and sanded and waxed in the natural it produces a charming and "homey" effect.

In order to preserve the individuality of Redwood in its beauty of figure and texture the California Redwood Association has developed a line of stains by which Redwood can be shaded to any color desired. These are permanent effects, economical in cost and exceedingly simple in proper application.

This stain is not sold, but the formulae are given so that any interior decorator or painter can successfully apply them if the instructions given are carefully and intelligently followed.

We give in this booklet formulae for 18 shades, and if any special color or shade is desired the Association's expert will work out a formula if a sample of the color is submitted.

Sample No. 1 Iron Gray

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve $1\frac{1}{3}$ ounces Reduced Iron (iron by hydrogen) in 21 ounces of glacial acetic acid for 4 days.

Then add to above 107 ounces water.

Filter, and stain is ready.

SECOND COAT—(Makes 1 gal. and 3 pts., covers 250 sq. ft.)

| | | | |
|-------------------|---------|--------|----------------|
| Raw Linseed Oil |1 | quart | } mix first |
| White lead in oil |2 | pounds | |
| Dry Silex |1½ | pounds | |
| Drop Black in oil |1 | ounce | } add in order |
| Turpentine |1 | pint | |
| Benzine |1 | quart | |
| Litharge |¼ | pound | |

Strain through cheese cloth and apply.

Sample No. 2 Russian Gray

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve $\frac{1}{4}$ pound Stannous Chloride in $\frac{1}{2}$ gallon of hot water—for Solution "A."

Dissolve $\frac{1}{4}$ pound Reduced Iron in $\frac{1}{2}$ gallon Glacial Acetic acid for 4 days—for solution "B."

To 16 ounces of Solution "A" add 16 ounces of solution "B."

Filter, and stain is ready.

R E S I S T S F I R E

R E D W O O D

SECOND COAT—(Makes 1½ gals., covers 250 sq. ft.)

| | | | |
|------------------------------|----|--------|----------------|
| Raw Linseed Oil | 1 | quart | } mix first |
| White Lead in oil | 8 | pounds | |
| Dry Silix | 2½ | pounds | |
| Vandyke Brown in oil | 1 | ounce | |
| Chrome Yellow (light) in oil | ⅓ | ounce | |
| American Vermilion in oil | ⅓ | ounce | } add in order |
| Aluminum Powder | 4 | ounces | |
| Turpentine | 1 | quart | |
| Benzine | 2 | quarts | |
| Litharge | ¼ | pound | |

Strain through cheese cloth and apply.

Sample No. 3 Pearl Gray

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 1 ounce of Reduced Iron (iron by hydrogen) in ½ pint of Glacial Acetic Acid for four days. Take 6 ounces of above solution, add 120 ounces water.

Filter, and stain is ready.

SECOND COAT—(Makes 1½ gals., covers 250 sq. ft.)

| | | | |
|------------------------------|---|--------|----------------|
| Raw Linseed Oil | 1 | quart | } mix first |
| Zinc in oil | 1 | pound | |
| White Lead in oil | 8 | pounds | |
| Dry Silix | 3 | pounds | |
| Chrome Green (light) in oil | ⅓ | ounce | |
| Chrome Yellow (light) in oil | ⅓ | ounce | } add in order |
| Turpentine | 1 | quart | |
| Benzine | 2 | quarts | |
| Litharge | ¼ | pound | |

Sample No. 4 Mauve Gray

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 4 ounces Gallic Acid, 4 ounces Nutgall, 4 ounces Permanganate in 1 gal. water.

SECOND COAT—(Makes 1½ gals., covers 250 sq. ft.)

| | | | |
|-----------------------------|----|--------|----------------|
| Raw Linseed Oil | 1 | quart | } mix first |
| White Lead | 8½ | pounds | |
| Dry Silix | 1½ | pounds | |
| Vermilion (American in oil) | ⅓ | ounce | |
| Turpentine | 1 | quart | |
| Benzine | 1½ | quarts | } add in order |
| Litharge | ¼ | pound | |

Sample No. 5 Peacock Blue

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 4 ounces Gallic Acid, 4 ounces Nutgall, 4 ounces Permanganate in 1 gal. water.

SECOND COAT—(Makes 1½ gals., covers 250 sq. ft.)

| | | | |
|-------------------------|----|--------|----------------|
| Raw Linseed Oil | 1 | quart | } mix first |
| Dry Silix | 3 | pounds | |
| White Lead | 4½ | pounds | |
| Ultramarine Blue in oil | 10 | ounces | |
| Raw Umber in oil | ¼ | pound | |
| Chrome Green (deep) | 1 | pound | } add in order |
| Aluminum Powder | ¼ | pound | |
| Turpentine | 1½ | quarts | |
| Benzine | 1½ | quarts | |
| Litharge | ¼ | pound | |

Sample No. 6 Medium Brown

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 4 ounces Gallic Acid, 4 ounces Nutgall, 4 ounces Permanganate in 1 gal. water.

D E F I E S R O T

C A L I F O R N I A

SECOND COAT—(Makes 1 ¼ gals., covers 200 sq. ft.)

| | | | |
|---------------------------|-----|--------|----------------|
| Raw Linseed Oil | 1 | quart | } mix first |
| Dry Silex | 4 | pounds | |
| American Vermilion in oil | 6 | ounces | |
| Burnt Sienna in oil | 1 | pound | |
| Aluminum Powder | ¼ | pound | } add in order |
| Rose Lake in oil | ½ | pound | |
| Turpentine | 1 ½ | quarts | |
| Benzine | 1 | quart | |
| Litharge | ¼ | pound | |

Sample No. 7 Dark Seal Brown

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 6 ounces Reduced Iron (iron by hydrogen) in 4 ounces Glacial Acetic Acid 4 days.

Take 3 ounces of above solution, add 120 ounces water. Filter, and stain is ready.

SECOND COAT—(Makes 1 ¼ gals., covers 250 sq. ft.)

| | | | |
|---------------------------|-----|--------|----------------|
| Raw Linseed Oil | 1 | quart | } mix first |
| Dry Silex | 4 | pounds | |
| American Vermilion in oil | 6 | ounces | |
| Burnt Sienna in oil | 1 | pound | |
| Rose Lake in oil | ½ | pound | } add in order |
| Aluminum Powder | ¼ | pound | |
| Turpentine | 1 ½ | quarts | |
| Benzine | 1 | quart | |
| Litharge | ¼ | pound | |

Sample No. 8 Old Rose

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 2 ounces of Nutgall (powdered) in ¼ gal. hot water—Solution "A."

Dissolve 2 ozs. Tannic Acid (powdered) in ¼ gal. hot water—Solution "B."

Dissolve 4 ounces Logwood Extract in ¼ gallon hot water—Solution "C."

Dissolve 1 oz. Gallic Acid in ¼ gal. hot water—Solution "D."

Mix well 4 ozs. Solution "A," 4 ozs. Solution "B," 8 ozs. Solution "C," 2 ozs. Solution "D."

Add 1 oz. of Powdered Alum. Filter, and stain is ready.

SECOND COAT—(Makes 1 gal., covers 200 sq. ft.)

| | | | |
|----------------------|-----|--------|----------------|
| Raw Linseed Oil | 1 | quart | } mix first |
| Dry Silex | 1 ½ | pounds | |
| Indian Red in oil | ¼ | pound | |
| White lead in oil | 2 | pounds | |
| Vermilion (American) | ⅓ | ounce | } add in order |
| Aluminum Powder | 1 ½ | ounces | |
| Turpentine | 1 | quart | |
| Benzine | 1 | quart | |
| Litharge | ¼ | pound | |

Sample No. 9 Pea Green

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 4 ozs. Gallic Acid, 4 ozs. Nutgall, 4 ozs. Permanganate in 1 gal. water.

SECOND COAT—(Makes 1 ½ gals., covers 250 sq. ft.)

| | | | |
|-----------------------------|----|--------|----------------|
| Raw Linseed Oil | 1 | quart | } mix first |
| Dry Silex | 3 | pounds | |
| Chrome Green (light) in oil | 14 | ounces | |
| Aluminum Powder | 6 | ounces | |
| Chrome Yellow (light) | 4 | ounces | } add in order |
| White Lead | 2 | pounds | |
| Turpentine | 1 | quart | |
| Benzine | 2 | quarts | |
| Litharge | ¼ | pound | |

R E S I S T S F I R E

R E D W O O D

Sample No. 10 *Light Gray* (Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)
Dissolve 4 ozs. Gallic Acid, 4 ozs. Nutgall, 4 ozs. Permanganate in 1 gal. water.

SECOND COAT—(Makes 1 gal., covers 200 sq. ft.)

| | | | |
|-------------------|----|--------|----------------|
| Raw Linseed Oil | 1 | quart | } mix first |
| Zinc in oil | 1 | pound | |
| White Lead in oil | 8 | pounds | |
| Dry Silex | 3 | pounds | } add in order |
| Turpentine | 1 | quart | |
| Benzine | 1½ | quarts | |
| Litharge | ¼ | pound | |

Sample No. 11 *Natural* (Interior Finish)

Sandpaper the wood. Give 3 coats Wax, well rubbed in.

Sample No. 12 *Antique Gray* (Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)
Dissolve ¼ lb. Stannous Chloride in ½ gal. of water for Solution "A."

Dissolve ¼ lb. Reduced Iron (iron by hydrogen) in ½ gal. Glacial Acetic Acid 4 days, for Solution "B."

To 16 ozs. of Solution "A" add 16 ounces Solution "B." Filter, and stain is ready.

SECOND COAT—(Makes 1 gal., covers 250 sq. ft.)

| | | | |
|------------------------------|----|--------|------------------|
| Raw Linseed Oil | 1 | quart | } Mix well first |
| Dry Silex | 1 | pound | |
| Green Seal Zinc in oil | 9½ | pounds | |
| White Lead, in oil (Carters) | 3 | pounds | |
| Chrome Green in oil | ⅛ | ounce | } then add |
| Turpentine | 1 | quart | |
| Benzine | 1 | quart | |
| Litharge or Sugar of Lead | ¼ | pound | |

Strain with cheese cloth.

Sample No. 13 *Medium Dove Gray* (Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)
Dissolve ¼ lb. Stannous Chloride in ½ gal. of water for Solution "A."

Dissolve ¼ lb. Iron (iron by hydrogen) in ½ gal. of Glacial Acetic Acid 4 days. Solution "B."

To 16 ozs. of Solution "A" add 16 ozs. Solution "B." Filter, and the stain is ready.

SECOND COAT:

| | | | |
|------------------------------|----|--------|------------|
| Raw Linseed Oil | 1 | quart | } Mix well |
| Dry Silex | 1 | pound | |
| Green Seal Zinc | 9½ | pounds | |
| White Lead (in oil), Carters | 3 | pounds | |
| Naples Yellow in oil | 1 | ounce | } then add |
| Vermilion Orange in oil | 1 | ounce | |
| Turpentine | 1 | quart | |
| Benzine | 1 | quart | |
| Litharge or Sugar of Lead | ¼ | pound | |

Strain with cheese cloth.

Sample No. 14 *Light Silver Gray* (Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)
Dissolve ¼ lb. Stannous Chloride in ½ gal. water for Solution "A."

Dissolve ¼ lb. Reduced Iron (iron by hydrogen) in ½ gal. of Glacial Acetic Acid 4 days for Solution "B."

D E F I E S R O T

C A L I F O R N I A

To 16 ozs. of Solution "A" add 16 ozs. Solution "B."

Filter, and stain is ready.

SECOND COAT—(Makes 1 gal., covers 250 sq. ft.)

| | | | |
|---------------------------|----|--------|------------|
| Raw Linseed Oil | 1 | quart | } Mix well |
| Dry Silica | 1 | pound | |
| Green Seal Zinc in oil | 14 | pounds | |
| Turpentine | 1 | quart | } then add |
| Benzine | 1 | quart | |
| Litharge or Sugar of Lead | 1 | pound | |

Strain with cheese cloth.

Sample No. 15 Jonquil Gray

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 6 ozs. Reduced Iron (iron by hydrogen) in 4 ozs. of Glacial Acetic Acid 4 days. To 3 ozs. of this solution add 120 ozs. water.

Filter, and stain is ready.

SECOND COAT—(Makes 1 gal., covers 200 sq. ft.)

| | | | |
|---------------------------|----|--------|------------|
| Raw Linseed Oil | 1 | quart | } Mix well |
| Dry Silica | 1 | pound | |
| Green Seal Zinc in oil | 14 | pounds | |
| Turpentine | 1 | quart | } then add |
| Benzine | 1 | quart | |
| Litharge or Sugar of Lead | 1 | pound | |

Strain with cheese cloth.

Sample No. 16 Antique Yellow

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 6 ozs. Reduced Iron (iron by hydrogen) in 4 ozs. of Glacial Acetic Acid 4 days. To 3 ozs. of this solution add 120 ozs. water.

Filter, and stain is ready.

SECOND COAT—(Makes 1 gal., covers 250 sq. ft.)

| | | | |
|--------------------------------|----|--------|------------|
| Raw Linseed Oil | 1 | quart | } Mix well |
| Dry Silica | 1 | pound | |
| Green Seal Zinc in oil | 10 | pounds | |
| White Lead (Carter's) | 4 | pounds | |
| Italian Pink in oil | 1 | ounce | |
| Naples Yellow in oil | 15 | ounce | |
| Mummy, or Vandyke Brown in oil | 15 | ounce | } then add |
| Turpentine | 1 | quart | |
| Benzine | 1 | quart | |
| Litharge or Sugar of Lead | 1 | pound | |

Strain with cheese cloth.

Sample No. 17 Steel Gray

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 1½ ozs. Reduced Iron (iron by hydrogen) in 21 ozs. Glacial Acetic Acid 4 days, then add 107 ozs. water.

Filter, and stain is ready.

SECOND COAT—(Makes 1 gal., covers 250 sq. ft.)

| | | | |
|---------------------------|----|--------|------------|
| Raw Linseed Oil | 1 | quart | } Mix well |
| White Lead (Carter's) | 8½ | pounds | |
| Dry Silica | 7½ | pounds | |
| American Vermilion in oil | 1 | ounce | |
| Ultramarine blue in oil | 1 | ounce | } then add |
| Turpentine | 1 | quart | |
| Benzine | 1 | quart | |
| Litharge or Sugar of Lead | 1 | pound | |

Strain with cheese cloth.

R E S I S T S F I R E

Sample No. 18 Cold Steel Gray

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve $1\frac{1}{3}$ ozs. Reduced Iron (iron by hydrogen) in 21 ozs. Glacial Acetic Acid 4 days, then add 107 ozs. water.

Filter, and stain is ready.

SECOND COAT—(Makes 1 gal., covers 250 sq. ft.)

| | | | |
|------------------------------|---------------|--------|---------------|
| Raw Linseed Oil | 1 | quart | } mix well |
| Green Seal Zinc in oil | 1 | pound | |
| White Lead (Carters) | 8 | pounds | |
| Dry Silex | 3 | pounds | |
| Chrome Green (light) in oil | $\frac{1}{6}$ | ounce | |
| Chrome Yellow (light) in oil | $\frac{1}{6}$ | ounce | } then add |
| Turpentine | 1 | quart | |
| Benzine | 2 | quarts | |
| Litharge or Sugar of Lead | $\frac{1}{4}$ | pound | |

Strain with cheese cloth.

Directions for Using Acid Stains

1. The wood should be thoroughly sand-papered to remove all soil or grease marks. Also dust well before the first stain is applied. Grease marks that do not respond to sand-paper can be removed with benzine. Don't sandpaper across the grain—rub with the grain.
2. The first coat should be applied evenly and carefully with a full brush, allowing the wood to satisfy its appetite by absorption. Should there be a hard streak in the wood it will show lighter than the rest of the piece. Treat this with sand-paper, dipping sand-paper in the first coat solution and sand-paper the place and apply more stain with brush. Repeat until a uniform coverage is secured.
3. The first coat should dry two days if the weather is warm and sunshiny. If rainy or moist, do not apply the second coat until the entire surface is uniformly clear and dry; that is, not spotted with damp places.
4. Before applying the second coat sand-paper lightly with No. 0 sand-paper. Remove the dust and apply the second coat with a brush. In applying the second coat work your surface to be covered in sections of about 10 square feet. When the second coat is put on it will remain for a little while with a bright wet appearance, while the wood is absorbing the stain. As soon as this wet appearance has faded into a flat dull effect, or loses its shine, the second coat should be rubbed with cheese cloth *first across the grain*, which fills the wood, and

then with the grain, which clears it and gives even distribution. After the section has been gone over in this way wipe the surface perfectly clean.

5. Be sure and "pick" all grooves, beads, corners, etc., of surplus material, changing the cheese cloth at the end of the "pick" with each rub to give a thorough cleaning. The "picking" must be done well or the corners, grooves, etc., will look dirty and give the work an untidy appearance.
6. If puttying is done before the second coat is applied, shorten the putty with benzine and a little dry coloring, this will prevent the oil in the putty from spreading and leaving the wood discolored around the nail holes. Stain a piece of wood, make nail holes and putty them as above stated; if the result is not right try a piece by puttying after it is filled—it is simpler to match the putty after the work is filled. Either method will give good results.
7. Under no circumstances use shellac on the wood before you apply this stain.
8. Two coats, as above described, finish the work in a flat tone. If a polish is desired it can be waxed. Allow the second coat a week or 10 days to dry before wax is applied.
9. Do not put any of these stain mixtures in tin—if you do the acids will attack the metal and spoil the stain. Use glass or crocks.
10. Never mix the different stains together. For instance Gallic acid should be kept from ammonia water vapor. With ferric salts it gives a bluish black precipitate. If saturated with potassium permanganate or chlorate it may take fire or explode.
11. **The wood must be thoroughly dry** if satisfactory results are to be secured. This is important, and those contemplating the use of the stain should assure themselves that the wood is thoroughly seasoned.
12. Before applying the stain to the work test it on a sample piece of Redwood.

Second Coat

This coat is composed of materials of a protective nature, namely:

Pure raw linseed oil (not boiled oil).

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Pure spirits of turpentine (not turps, or near turpentine).

Pure benzine (not distillate or coal oil).

Dry silex, finely ground (not dry ochre).

Colors ground in oil to obtain the color desired.

White lead ground in oil (not dry lead).

Zinc, ground in oil (not dry zinc).

Aluminum dry powder.

Drier—Either $\frac{1}{4}$ pound of litharge to the gallon, or $\frac{1}{2}$ pint Japan drier.

How to Mix Second Coat Properly

1. Add the oil.
2. White lead or zinc.
3. Dry silex.
4. Then add the aluminum (if specified).
5. Add the turpentine.
6. Add the colors ground in oil (as specified).
7. Add the benzine.
8. Add the drier.

} Mix these
} ingredients
} thoroughly.

Mix well and strain through a fine weave cheese cloth.

Oil Stains

Oil stains are used very successfully on Redwood, but do not give the range of artistic color possibilities that are procurable through the medium of acid stain. The oil stain has a tendency to darken the wood, and this applies particularly to the ends of a piece, such as a mantel-top where the ends show.

Formula:

Boiled Linseed Oil 5 Gals.

Turpentine 1 Gal.

Color ground in oil to suit the shade or tone required.

Silex (finely ground) 3 Lbs.

Litharge or sugar of lead for a dryer.

(Covers 250 square feet.)

The wood should be carefully sand-papared and wiped free of dust before the stain is applied. It should be applied freely and rubbed well into the pores to give a clear and even coverage.

Wipe with clean cheesecloth. When the first coat is dry it should be sand-papared lightly and then finished with a coat of wax, shellac, or varnish.

Creosote Stains for Exterior Use

There are various kinds of stain only the superiority of creosote stains over paint is readily apparent. Paint is a liquid opaque mixture which completely covers the wood and hides its natural surface. Stain, whether oil or water base, is the art of applying transparent color by which the natural beauty of grain and texture can be preserved.

As an example—If a house is built of hand-hewn shingles but with ironing and sand, such shingles lose an individual surface texture or appearance. If painted, these individual characteristics are retained and contribute to the beauty of the finished effect. If painted, these characteristics are lost in a uniform monotony of color.

The color effects of creosote stains are rich, warm and soft. They harmonize perfectly with Nature's tones, and these effects seem to improve with age, rather than deteriorate.

Paint can be laid as well over a creosote stain as it would on raw wood. For this reason a stain makes an extremely pleasant oil smooth surface on which paint is so far inferior. Paint, as it is the wood and has preserving properties.

Using in the protected atmosphere properties of creosote it is desirable for the inside of stables, ramps, rail car sheds, etc., for preventing rust and preventing damage.

Formula

| | |
|---------------------|---------|
| Creosote | 1 Gall. |
| White ground in oil | 2 lbs. |

Can be put on anything in brush.

Oil color (optional)

Stains, as desired.

It can be used as a preservative on all parts of outside structure, and also prevent rotting caused by the creeping animals.

Enameling Redwood

Priming is the foundation upon which the whole superstructure of enamel will either make good or fail, therefore one should thoroughly understand its principles and take the utmost care to make the application in a good workmanlike manner.

A little color should be added to each coat, according to the depth of finished tone, as this insures a more satisfactory job.

The priming, or foundation coat, is the only one in which linseed oil should be used. The priming coat should have ample time to dry; it may feel dry and seem hard under the touch of the finger, but this is not always an indication it is thoroughly dry. No less than a week should be allowed for drying, and two weeks would be better. Linseed oil absorbs oxygen from the atmosphere for about 10 days, and during that period it is undergoing changes in both form and bulk; it increases about 10 per cent, and it is not to be considered dry until this change takes place. Another coat on top of the priming coat before it is thoroughly dry shuts out access to the air and arrests the drying process.

The priming coat should be well sandpapered. This done, the work should be followed by applications which are best known as flat or lead coats, and allow 4 days for drying.

Formula for priming coat for the interior:

| | |
|---------------------------|----------|
| White Lead | 100 Lbs. |
| Boiled Linseed Oil | 7 Gals. |
| Turpentine | 1½ Gals. |
| Litharge or sugar of lead | 1¼ Lbs. |

(Covers 250 square feet.)

Use white lead putty. Make this by mixing or kneading 50 per cent of raw linseed oil and putty with 50 per cent of white lead (12-year lead). This makes a putty that will sandpaper nicely, won't shrink or harden, and dries filling the hole completely.

Formula for second coat. (Flat or lead coat):

| | |
|--------------------------------|----------|
| White Lead | 100 Lbs. |
| Turpentine | 3 Gals. |
| Binding Varnish (good quality) | 1 pint |
| Sugar of Lead | 2 ozs. |

(Cover 100 square feet.)

The second coat should also be well sandpapered; that being done, the third or preparatory coat for enameling should be applied.

Formula for third coat or preparatory coat for enameling:

| | |
|-----------------|----------|
| White Lead | 100 Lbs. |
| Turpentine | 2½ Gals. |
| Binding Varnish | 1 Qt. |
| Sugar of Lead | ¼ Lb. |

(Cover 100 square feet.)

The third coat should be well sandpapered. Then apply the enamel.

Remember a good enamel will go further, work easier under the brush and last longer and with more gloss than a cheap enamel.

For an eggshell gloss, use eggshell enamel.

For an ordinary lead and oil job follow formula for exterior painting, only allow more time for drying.

Paint

Because of its soft, absorbing nature and the abundance of pitch and resin, Redwood is an ideal surface for the application of paint.

Paint should never be applied to Redwood unless the wood is thoroughly dry. Redwood should be painted so on either side of the board as to give a coat of paint on both sides. The paint should be applied with a brush or roller, and the surface should be smoothed with a fine cloth.

Surfing should be done on knots or sap in painting exterior Redwood. For interior painting knots and sap can be sanded lightly, but the priming coat is applied without sanding. If the paint is applied directly to Redwood it is likely to scale. If the paint is applied to a surface that has been thoroughly sandpapered before applying the paint, the paint will adhere better.

No permanent job of painting on any kind of wood is finished until the paint has been applied in three coats.

Priming or First Coat

The priming or first coat should be mixed thin and with sufficient oil to satisfy the absorbing power of the wood, and only enough pigment to provide a foundation.

Formula:

White Lead100 Lbs.
 Raw Linseed Oil..... 7 Gals.
 Turpentine½ Gal.
 Litharge Drier½ to ¾ Lb.
 (Covers 300 square feet.)

(Note: Use Litharge only in damp weather. Drier should not be used in hot weather.)

(Note: White lead varies in brands—the older the lead the more oil it will absorb. Formulae given in this book are based on 12-year lead.)

Litharge should be well mixed with turpentine before adding it to the paint.

If Japan drier is desired use one gill of good Japan drier instead of the litharge stated above. When Japan drier is used the paint should be stirred frequently to keep it in proper solution.

The priming coat must have from 5 to 7 days to dry, and not less than 12 days in case the surface is exposed to rains or dampness.

Never use yellow ochre for priming—it dries too hard, has no elasticity and the second coat cannot adhere properly. Fifty per cent imported French silica ochre, ground in oil, can be used with safety—the other 50 per cent being white lead. Under no condition use white ochre on surfaced or planed material. Imported French silica ochre is permanent in color and *extremely durable* in wearing qualities. It is also very useful and valuable in mixing or tinting pigment. On rough barns, fences, etc., it has no equal; both yellow and white ochre can be used on rough surfaces.

Second Coat

After all nail holes, etc., are well puttied with pure linseed oil putty (not glazier's putty) the work is

ready for the second coat. This coat should be colored the shade the work is to be when completed.

Formula:

| | |
|---------------------------|----------|
| White Lead | 100 Lbs. |
| Raw Linseed Oil | 5 Gals. |
| Turpentine | 1 Gal. |
| Color ground in oil. | |
| (Covers 250 square feet.) | |

The same amount of drier and time to dry should be given this coat as the priming coat.

This second coat should be well brushed out—the brushing excludes the air and allows the paint to dry hard and uniform. Much trouble with paint can be traced to improper application of the second coat.

Third Coat

The third coat, in addition to being the finishing coat, must withstand the elements—heat, cold, humidity, rain or snow, salt air on the sea coast, etc., and it should be mixed accordingly. Consideration should also be given in mixing the third coat as to whether the exposure is north, east, south, or west. The wearing power of paint is always poorest on the southern exposure, where it is subjected longest to the rays of the sun. In some sections paint will last only one-quarter as long on a southern exposure as it will on the north side.

The following formula should be used where there is a hot climate and on southern or sun exposures:

| | |
|---------------------------|---------------|
| White Lead | 100 Lbs. |
| Raw Linsed Oil | 3½ to 4 Gals. |
| Turpentine | ½ Gal. |
| (Covers 250 square feet.) | |

For northern exposure add an additional ½ gallon of turpentine.

The following formula should be used along the sea coast or where salt air is encountered:

| | |
|---|---------------|
| White Lead | 75 Lbs. |
| Pure French Green Seal Zinc, ground in oil | 25 lbs. |
| Raw Linseed Oil | 3½ to 4 Gals. |
| Turpentine | ½ Gal. |
| (Covers 250 square feet.) | |

